Title (en)

Memory device comprising an array of nanoscale cells

Title (de)

Speichervorrichtung mit einem Array von nanoskaligen Zellen

Title (fr)

Dispositif de mémoire comprenant un réseau de cellules d'échelle nanométrique

Publication

EP 2309515 A1 20110413 (EN)

Application

EP 09172679 A 20091009

Priority

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Abstract (en)

The invention relates to a memory device (1) comprising an array of non-volatile memory cells (2). It also relates to a non-volatile memory chip comprising an array of such memory devices and capable to store both the digital and analogue values in such a memory device. The programming and reading methods and fabrication process are also presented. According to the invention, each memory cell (2) is embodied by a nanoscale component having three terminals, an electrical characteristic between a first and a second terminal of each nanoscale component (2) being able to represent a data and being able to be modified by applying a signal to this first terminal or to this second terminal, a third terminal of each nanoscale component being able to prevent the electrical characteristic of the corresponding nanoscale component from being modified and sensed by applying a positive and non-null voltage to it.

IPC 8 full level

G11C 11/54 (2006.01); **G11C 11/56** (2006.01); **G11C 13/02** (2006.01); **G11C 27/00** (2006.01)

CPC (source: EP)

B82Y 10/00 (2013.01); **G11C 11/54** (2013.01); **G11C 11/56** (2013.01); **G11C 13/025** (2013.01); **G11C 27/005** (2013.01); G11C 2213/17 (2013.01); G11C 2213/19 (2013.01); G11C 2213/52 (2013.01)

Citation (applicant)

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Designated contracting state (EPC)

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DOCDB simple family (publication)

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